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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,200	11/03/2003	Jo-Wen Lin	525-400-326	4195
25763 7590 10/25/2011 DORSEY & WHITNEY LLP - MINNEAPOLIS ATTENTION: PATENT PROSECUTION DOCKETING DEPARTMENT INTELLECTUAL PROPERTY PRACTICE GROUP - PT/23RD FL 50 SOUTH SIXTH STREET, SUITE 1500 MINNEAPOLIS, MN 55402-1498				
EXAMINER SCHILLINGER, ANN M				
ART UNIT		PAPER NUMBER		
3774				
NOTIFICATION DATE		DELIVERY MODE		
10/25/2011		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.docket@dorsey.com

Office Action Summary**Application No.**

10/700,200

Applicant(s)

LIN, JO-WEN

Examiner

ANN SCHILLINGER

Art Unit

3774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-37 is/are pending in the application.
- 5a) Of the above claim(s) 1-20, 33 and 34 is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 21-32 and 35-37 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-CIBOC)
Paper No(s) Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s) Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-32 and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyle et al. (US Pat. No. 6,277,149) in view of Gresser et al. (US Pat. No. 6,241,771). Boyle et al. teaches the following of claim 21: a spinal bone implant comprising: a body (500 or 600) made of bone (col. 2, lines 28-55) and having superior (top) and inferior (bottom) surfaces (Figs. 16-19), the substantially entirety of said superior and inferior surfaces capable of load bearing against respective adjacent vertebrae defining a disc space therebetween (col. 6, lines 1-22), the body having spaced respective anterior (front) and posterior (back) ends defining an anterior-posterior axis, the body having an outer peripheral surface substantially entirely of load bearing material (Figs. 16-19; col. 2, lines 28-55) and a single instrument-receiving bore (552, or 550, or 652, or 650) formed in the outer peripheral surface at the anterior end, the bore extending in the region between the inferior and posterior surfaces (Figs. 16-19), the bore being at least one of inclined at an angle to the anterior-posterior axis or offset relative to the anterior-posterior axis, and the bore having a diameter and a length wherein the diameter and the length substantially match a diameter and length of an implant engaging portion of an implant insertion instrument such that force from the implant insertion instrument is displaced over a relatively wide area of the bore (Figs. 16-19; col. 6, lines 1-22).

Boyle et al. teaches the following of claim 36: a spinal bone implant comprising: a body (500 or 600) made of bone (col. 2, lines 28-55) and having superior and inferior surfaces the substantial entirety of said superior (top or 522) and inferior (bottom or 524) surfaces capable of load bearing against respective adjacent vertebrae defining a disc space therebetween (Figs. 16-19; col. 6, lines 1-22), the body defining a plane and having spaced respective anterior (front) and posterior (back) ends defining an anterior-posterior axis in the plane, the body having a central opening (Figs. 16-19) in communication with the inferior and superior surfaces, the body having a curved outer peripheral surface (col. 6, lines 1-22) substantially entirely of loading bearing material (col. 2, lines 28-55) and a single instrument-receiving bore (552, 550 or 652, 650) formed in the outer peripheral surface at the anterior end, the bore extending in the region between the inferior and superior surfaces, the bore being at least one of inclined at an angle to the anterior-posterior axis or offset relative to the anterior-posterior axis, and the bore having a diameter and a length wherein the diameter and the length substantially match a diameter and length of an implant engaging portion of an implant insertion instrument such that force from the implant insertion instrument is displaced over a relatively wide area of the bore (Figs. 16-19; col. 6, lines 1-22).

Boyle et al. teaches the following of claim 37: a spinal bone implant comprising: a body (500 or 600) made of cortical bone (col. 2, lines 28-55) formed from a traverse section slice taken from the diaphysis of a long bone (col. 2, lines 28-55) and having superior (top or 522) and inferior (bottom or 524) surfaces for bearing against respective adjacent vertebrae defining a disc space therebetween (Figs. 16-19; col. 6, lines 1-22), the body defining a plane and having spaced respective anterior (front) and posterior (back) ends defining an anterior-posterior axis in the

plane, the body having an outer peripheral surface substantially entirely of load bearing material (col. 6, lines 1-22; Figs. 16-19) and a single instrument-receiving bore (552, 550 or 652, 650) formed in the outer peripheral surface at the anterior end, the bore extending in the region between the inferior and superior surfaces, the bore being at least one of inclined at an angle to the anterior-posterior axis or offset relative to the anterior-posterior axis, and the bore having a diameter and a length wherein the diameter and the length substantially match a diameter and length of an implant engaging portion of an implant insertion instrument such that force from the implant insertion instrument is displaced over a relatively wide area of the bore (Figs. 16-19; col. 6, lines 1-22).

Boyle et al. does not teach the instrument-receiving bore being unthreaded. Gresser et al. teaches a spinal fusion device with an unthreaded instrument receiving bore in col. 4, lines 19-34 for the purpose of ensuring that the bore will properly with its appropriate instrument. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Boyle et al. to replace a threaded bore with an unthreaded bore in order to allow the bore to properly fit with its appropriate instrument.

Boyle et al. teaches claim 22 as shown in Figures 16-19.

Boyle et al. teaches the following of claim 23: the implant of claim 21 wherein the implant has a central opening in communication with said inferior and superior surfaces, the bore being blind and extending in a direction parallel to the inferior and superior surfaces (Figs. 16-19).

Boyle et al. teaches claim 24 as shown in Figures 16-19.

Boyle et al. teaches the following of claim 25: the implant of claim 21 wherein the implant has a central opening in communication with said inferior and superior surfaces, the bore being in communication with the anterior end surface and the central opening (Figs. 16-19).

Boyle et al. teaches the following of claim 26: the implant of claim 21 wherein the implant has an outer peripheral wall surface, the outer peripheral wall surface having a substantially curved portion (curved upper and lower surfaces, located near the label for element 528) and a single substantially flat portion (located on the front end of implant), the substantially flat portion being located on said axis at said anterior end of the implant, the substantially curved portion extending from a first end of the single substantially flat portion to the second end thereof, and the posterior end being located along the substantially curved portion (Figs. 16-19).

Boyle et al. teaches claims 27-29 as shown in Figures 1 and 2.

Boyle et al. teaches the following of claim 30: the implant of claim 21 wherein at least one of the inferior and superior surfaces are roughened (528) to minimize backing out of the implant from between the vertebrae and at least one of the inferior and superior surfaces is inclined relative to the axis.

Boyle et al. teaches the following of claim 31: the implant of claim 21 wherein the body is made of a section of the diaphysis of a long bone (col. 2, lines 28-55).

Boyle et al. teaches the following of claim 32: the implant of claim 21 wherein the body is cortical bone (col. 2, lines 28-55).

Boyle et al. teaches the following of claim 35: the implant of claim 21 wherein the body comprises a slice of cortical bone taken from the diaphysis of a long bone (col. 2, lines 28-55).

Response to Arguments

In view of the amendments submitted 8/15/2011, the 35 U.S.C. 112 rejections are withdrawn. Previously, the claims stated that the substantial entirety of the body's upper and lower surfaces actively bear the load of the vertebral bodies. These claims have now been amended to state that the substantial entireties of these surfaces are merely capable of load bearing.

Applicant's arguments with respect to claims 21-32 and 35-37 have been considered but are moot in view of the new ground(s) of rejection. The claims filed 8/15/2011, were amended to overcome the rejection under 35 U.S.C. 102(b) by Boyle et al., by stating that the bore is "unthreaded." Applicant did not provide any further arguments to differentiate the claim from the implant disclosed by Boyle et al.

Regarding claim 22, the Applicant contends that Boyle et al. does not teach a blind bore that does not extend through the weight bearing peripheral surface. The examiner respectfully disagrees. Figures 16-19 of Boyle et al. show a blind bore located on the front of the device. Figures 14-15 further show that the bore does not extend through the entirety of the weight bearing peripheral surface.

The Applicant also states that Boyle et al. does not teach has an outer peripheral wall surface with a substantially curved portion and a substantially flat portion. The examiner respectfully disagrees. Boyle et al. shows in Figures 16-19 that the device may have rounded edges along the upper and lower body portions of the implant, while the anterior and the

posterior areas are substantially flat. Therefore, the outer peripheral wall of Boyle et al. has a substantially curved portion (curved upper and lower surfaces, located near the label for element 528) and a single substantially flat portion (located on the front end of implant).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ann Schillinger whose telephone number is (571)272-6652. The examiner can normally be reached on Monday-Friday (9am-5:30pm).

If attempts to reach the examiner by telephone are unsuccessful, please contact the examiner's supervisor, David Isabella, at 571-272-4749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

If there are any inquiries that are not being addressed by first contacting the Examiner or the Supervisor, you may send an email inquiry to TC3700_Workgroup_D_Inquiries@uspto.gov.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. S./
Examiner, Art Unit 3774

/DAVID ISABELLA/
Supervisory Patent Examiner, Art Unit 3774